

Artificial intelligence prompt engineering as a new digital competence: Analysis of generative AI technologies such as ChatGPT

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Abstract

Objective: The article aims to offer a thorough examination and comprehension of the challenges and prospects connected with artificial intelligence (AI) prompt engineering. Our research aimed to create a theoretical framework that would highlight optimal approaches in the field of AI prompt engineering.

Research Design & Methods: This research utilized a narrative and critical literature review and established a conceptual framework derived from existing literature taking into account both academic and practitioner sources. This article should be regarded as a conceptual work that emphasizes the best practices in the domain of AI prompt engineering.

Findings: Based on the conducted deep and extensive query of academic and practitioner literature on the subject, as well as professional press and Internet portals, we identified various insights for effective AI prompt engineering. We provide specific prompting strategies.

Implications & Recommendations: The study revealed the profound implications of AI prompt engineering across various domains such as entrepreneurship, art, science, and healthcare. We demonstrated how the effective crafting of prompts can significantly enhance the performance of large language models (LLMs), generating more accurate and contextually relevant results. Our findings offer valuable insights for AI practitioners, researchers, educators, and organizations integrating AI into their operations, emphasizing the need to invest time and resources in prompt engineering. Moreover, we contributed the AI PROMPT framework to the field, providing clear and actionable guidelines for text-to-text prompt engineering.

Contribution & Value Added: The value of this study lies in its comprehensive exploration of AI prompt engineering as a digital competence. By building upon existing research and prior literature, this study aimed to provide a deeper understanding of the intricacies involved in AI prompt engineering and its role as a digital competence. Article